

REMARKS

Claims 1, 4, 9, 10 and 13 are amended and Claims 19-23 are added. Claims 1-23, as amended, remain in the application. No new matter is added by the amendments to the claims.

In the Office Action dated May 3, 2005, the Examiner objected to Claims 4 and 10 because of the following informalities:

Claim 4, line 2, the phrase "said the" should read --said--

Claim 10, line 2 recites a "rope apparatus" which has not previously been claimed.

Applicants amended Claim 4 as suggested by the Examiner and amended Claim 10 to change "rope apparatus" to "rope assembly". These amendments to Claims 4 and 10 correct the informalities noted by the Examiner.

The Examiner rejected Claims 9 and 10 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Regarding Claim 9, the Examiner stated that multiple uses of the term "preferably" render the claim indefinite because it is unclear whether the limitation(s) following the term are part of the claimed invention. See MPEP § 2 173.05(d). Regarding Claim 10, the Examiner stated that it is unclear how the reinforcement element can be arranged in an interior of the rope apparatus between fibers of said ropes and said rope sheathing, or likewise how the reinforcement element can be arranged as a coating within said rope sheathing, since Claim 1 specifically requires the reinforcement element to be exposed at an outer surface of the rope assembly.

Applicants amended Claim 9 to remove the term "preferably" and the associated configurations related thereto thereby overcoming the rejection under 35 U.S.C. 112, second paragraph. Applicant added dependent Claims 19-21 which define preferred configurations of the woven mat, the fiber mat and the meander-shaped hoop winding respectively.

Applicants amended Claim 1 to remove the requirement that "the reinforcement element to be exposed at an outer surface of the rope assembly" thereby overcoming the rejection of Claim 10 under 35 U.S.C. 112, second paragraph.

The Examiner rejected Claims 1-6, 10, and 13-18 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,651,572 issued to St. Germain. The Examiner stated that St. Germain teaches a synthetic fiber rope assembly (Figure 1) comprising at least two ropes (Figure

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5; details 7, 8) each formed of synthetic fiber strands (Column 2, lines 63-65) and extending generally parallel in a lengthwise direction at a predetermined distance from each other, a dumbbell shaped rope sheathing (Figure 5; detail 5) forming a fixed link between said at least two ropes, and at least one reinforcement element (10) attached as an integral component of the rope sheathing (9), having an oblong shape and extending in a lengthwise direction, enveloping the rope sheathing in a tubular form, and exposed at an outer surface of the rope assembly for mechanically reinforcement, wherein the reinforcement element overlaps itself in the lengthwise direction (Figure 1 shows the cord overlaps itself at the end; likewise, the sheath/reinforcement element extend the length of the rope assembly, in the shape of an oblong tube).

The St. Germain patent shows a roundsling wherein lifting core strands 7 and 8 and a fiber optic strand 1 are contained in a protective tubular cover material of either a single envelope 5 or a double envelope 5 and 10. Although not stated in the description, the drawings indicate that the protective cover material (5 and 10) is synthetic resin or plastic. See MPEP § 608.02.

Applicants amended Claims 1 and 13 to clarify that the reinforcement element, in addition to mechanically reinforcing the rope sheathing, improves a transverse resistance of the ropes. The St. Germain patent does not teach or suggest that the envelope 10 in any way mechanically reinforces the envelope 5 as defined by Applicants' amended claims. In fact, the only mechanical attachment between the envelope 10 and the envelope 5 appears to be along a longitudinal line used to form separate paths as shown in Fig. 5.

The St. Germain patent also does not teach or suggest that the envelope 10 in any way improves a transverse resistance of the core strands 7 and 8 as defined by Applicants' amended claims. The envelopes 10 and 5 are simply pulled over the core strands 7 and 8 during assembly (Column 5, Lines 60-63) and the envelope 10 cannot improve the transverse resistance of the envelope 5 since the envelopes will be deflected transversely equally.

The Examiner rejected Claims 8, 9, and 11 under 35 U.S.C. 103(a) as being unpatentable over St. Germain in view of U.S. Patent No. 4,534,163 issued to Schuerch. The Examiner stated that St. Germain essentially teaches the invention as discussed above, but fails to specifically teach the different types of sheaths capable of being used to protect the ropes. According to the Examiner, Schuerch teaches that braided sheathes are well known as a source of protection to inner rope structures and it would have been obvious to one of ordinary skill in the art, at the

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time the invention was made, to utilize a braided sheath as taught by Schuerch, so as to provide protection in a more efficient manner. The Examiner further stated that, likewise, Schuerch teaches that materials such as nylons and other plastics may be used as outer coverings and the ordinarily skilled artisan would have understood this teaching and known that a well known plastic such as polyester would provide the necessary strength and protective qualities required of the braid, and as a result, would have utilized a polyester in the braid of the invention.

Claims 8, 9 and 11 define different constructions of the reinforcement member, not the sheathing. Schuerch teaches that filaments 8 are wrapped with ribbons 29a of absorbent material which are then impregnated with urethane. An outer sheath 48 can be substituted for the urethane. Various advantages of the rope construction are listed in Column 5, Lines 26-42 and 60-65, but improving a transverse resistance of the filaments is not one of them. There is no motivation to substitute a braided sheath for the envelope 10 of St. Germain and no indication that doing so would result in the claimed invention.

The Examiner objected to Claims 7 and 12 as being dependent upon a rejected base claim, but stated they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants added new Claim 22 which is original Claim 7 rewritten in independent form and new Claim 23 which is original Claim 12 rewritten in independent form. Therefore, Applicants believe that new Claims 22 and 23 are allowable.

The Examiner stated that the prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. The Examiner cited: the U.S. Patent No. 4,724,929 issued to Coleman et al; the U.S. Patent No. 5,605,036 issued to Onuma et al; the U.S. Patent No. 5,881,843 issued to O'Donnell et al; the U.S. Patent No. 6,508,051 issued to De Angelis; and the U.S. Patent No. 6,672,046 issued to Prewo et al. Applicants reviewed these references and found them to be no more pertinent than the prior art relied upon by the Examiner in his rejections.

In view of the amendments to the claims and the above arguments, Applicants believe that the claims of record now define patentable subject matter over the art of record. Accordingly, an early Notice of Allowance is respectfully requested.

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